Natural Inquirer Scientific Process Module

Unit 1, Lesson 2: What Does It ean to Be a Scientist? What Is the Scientific rocess

Objectives:

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Time Needed:

2- class periods

Materials (for each student or group of students)**:**

- *Natural Inquirer monograph or article*
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What does it mean to be a scientist? Scientists are curious and creative people who use their talents in search of new information. Some scientists work in the arena of basic science. However, most scientists do applied science, which means that they try to solve problems or answer questions that will directly benefit society. Scientists are people who use the scientific process, which requires accuracy, patience, and open-mindedness. Therefore, scientists are people who are willing to make mistakes and learn from them. They are willing to e pose their work to others for review and comment. They are willing to take constructive criticism and learn from others. Scientists must also be critical thinkers, both about their own work and the work of other scientists.

Scientists must be able to incorporate their creativity into the general process of scientific inquiry. Scientists also are good at developing and implementing plans, observing and recording data, and employing technology to analyze their data. Finally, scientists must communicate their results to other scientists and to the public.

In this lesson, students will be introduced to the qualities of scientists. ou will also introduce them to the general scientific process.

Methods:

Prep

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Day One

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Scientific Process Graphic Organizer.

Day Two

Have students review their Scientific Process Graphic Organizer. Then tell students that they will seeing a real-life example of the scientific process while reading a *Natural Inquirer* monograph or article. The text is from a real USDA Forest Service scientist, like one of the people shown on the cards during Unit One, Lesson One. Before reading the text, flip through the text with students and identify the parts of the text that correlate to the parts of the scientific process.

- Thinking about Science- explains application of a larger science concept such as the importance of team work in science
- Thinking about Environment- explains application of environmental theme or idea
- Introduction Section- provides background research and defines the problem
- Method Section- explains how scientists try to answer the problem
- Findings Section- tells what the scientists discovered
- Discussion Section- describes what the findings mean or leads to more questions

Then, direct students to read the entire article starting at the “Meet the Scientists” section.

Day Three

To conclude this lesson, review with students the scientific process and reinforce the idea that no matter what type of science is done most scientists use the scientific process to “do” science.

Then explain to students the plan for using *Natural Inquirer* texts over the entire year to learn about the scientific process. By the end of the year, students will do a research project using the scientific process, creating their own article in the same format as a Natural Inquirer article.

Students who would like an extra challenge can read an additional *Natural Inquirer* article and compare it to the one read by the whole class.